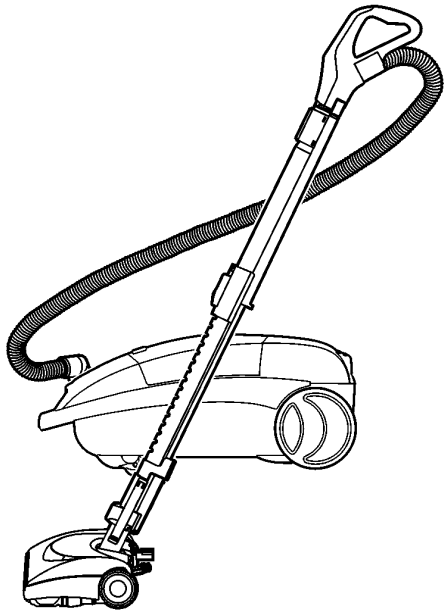
Order Number MAC1002002CE
E4

Service Manual

Vacuum Cleaner

MC-CG902-00



Model	MC-CG902-00
Power Source	AC 120V (60 Hz)
Power Consumption	12.0 Amps
Cord Length	24 Ft.
Headlight	Yes
Tools-On-Board	Yes
Weight	30.0 lbs.

Specifications are subject to change without notice for further improvement.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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CONTENTS

Page

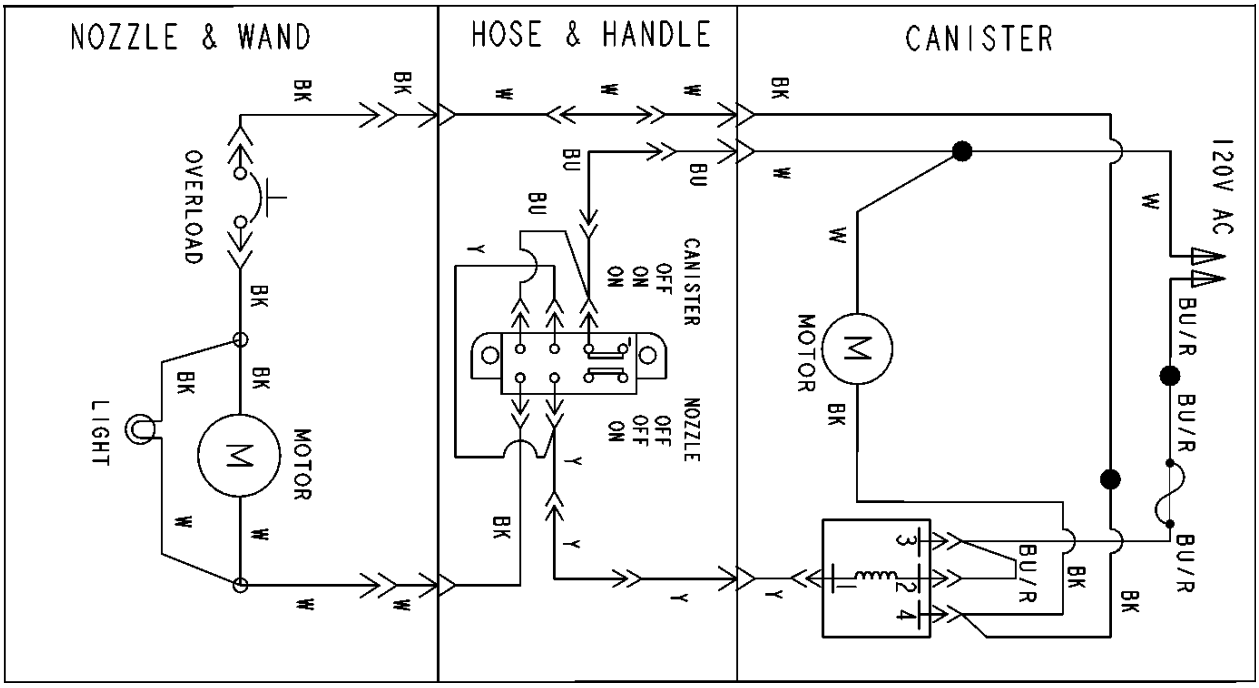
1 WIRING DIAGRAM 3
1.1. Wiring Schematic 3
1.2. Pictoral Diagram 3
2 EXPLODED VIEW AND PARTS LIST 4
2.1. Power Nozzle 4
2.2. Canister 6
2.3. Hose & Attachments 8
2.4. Cord Reel 9
2.5. Packing Materials 10
3 SERVICE PROCEDURES - POWER NOZZLE 11

Page

3.1. BELT 11
3.2. BULB 12
3.3. POWER NOZZLE MOTOR 12
3.4. AGITATOR ASSEMBLY 13
4 SERVICE PROCEDURES - CANISTER 14
4.1. HOOD 14
4.2. CANOPY COVER 14
4.3. CORD REEL 14
4.4. CANISTER MOTOR 14

1 WIRING DIAGRAM

1.1. Wiring Schematic

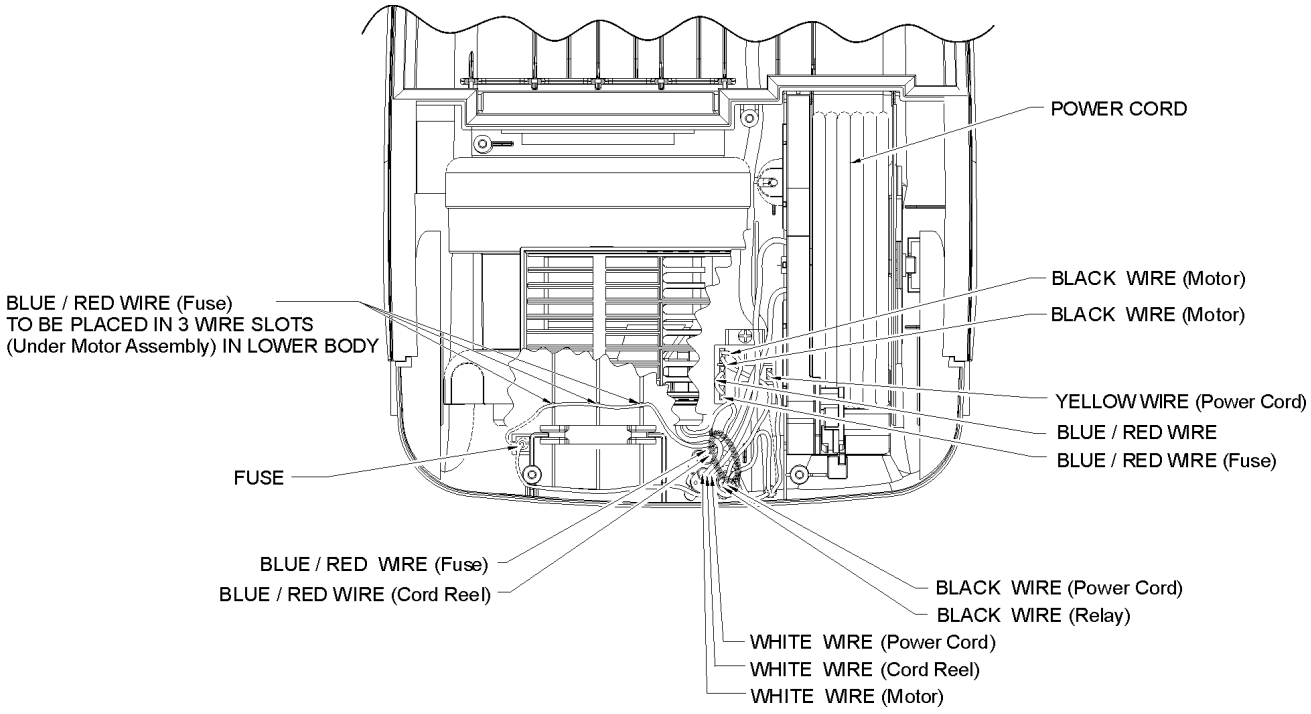


1.2. Pictoral Diagram

NOTE:

For general servicing, it is necessary to eliminate pinching of any wire during reassembly. After servicing any electrical component or electrical enclosure, the unit should be reassembled and checked for dielectric breakdown or current leakage.

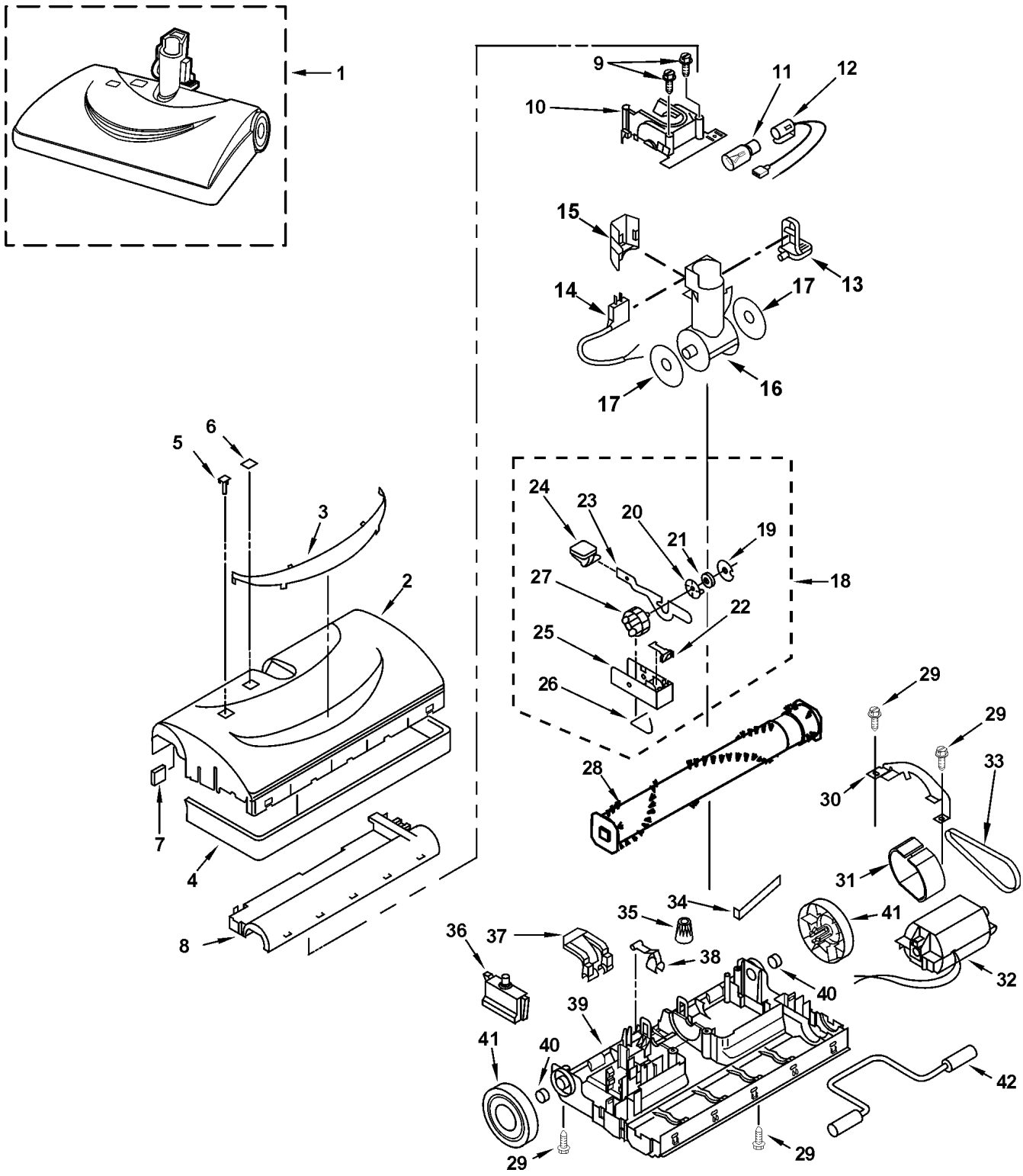
Use part number AC79FCWZZ000 (FIBERGLASS CLOTH TAPE) whenever original tape is removed.


POWER CORD
BLACK WIRE (Motor)
BLACK WIRE (Motor)
BLUE / RED WIRE (Fuse)
TO BE PLACED IN 3 WIRE SLOTS
(Under Motor Assembly) IN LOWER BODY
YELLOW WIRE (Power Cord)
BLUE / RED WIRE
BLUE / RED WIRE (Fuse)
FUSE
BLUE / RED WIRE (Fuse)
BLUE / RED WIRE (Cord Reel)
BLACK WIRE (Power Cord)
BLACK WIRE (Relay)
WHITE WIRE (Power Cord)
WHITE WIRE (Cord Reel)
WHITE WIRE (Motor)

2 EXPLODED VIEW AND PARTS LIST

2.1. Power Nozzle

2.1.1. Exploded View

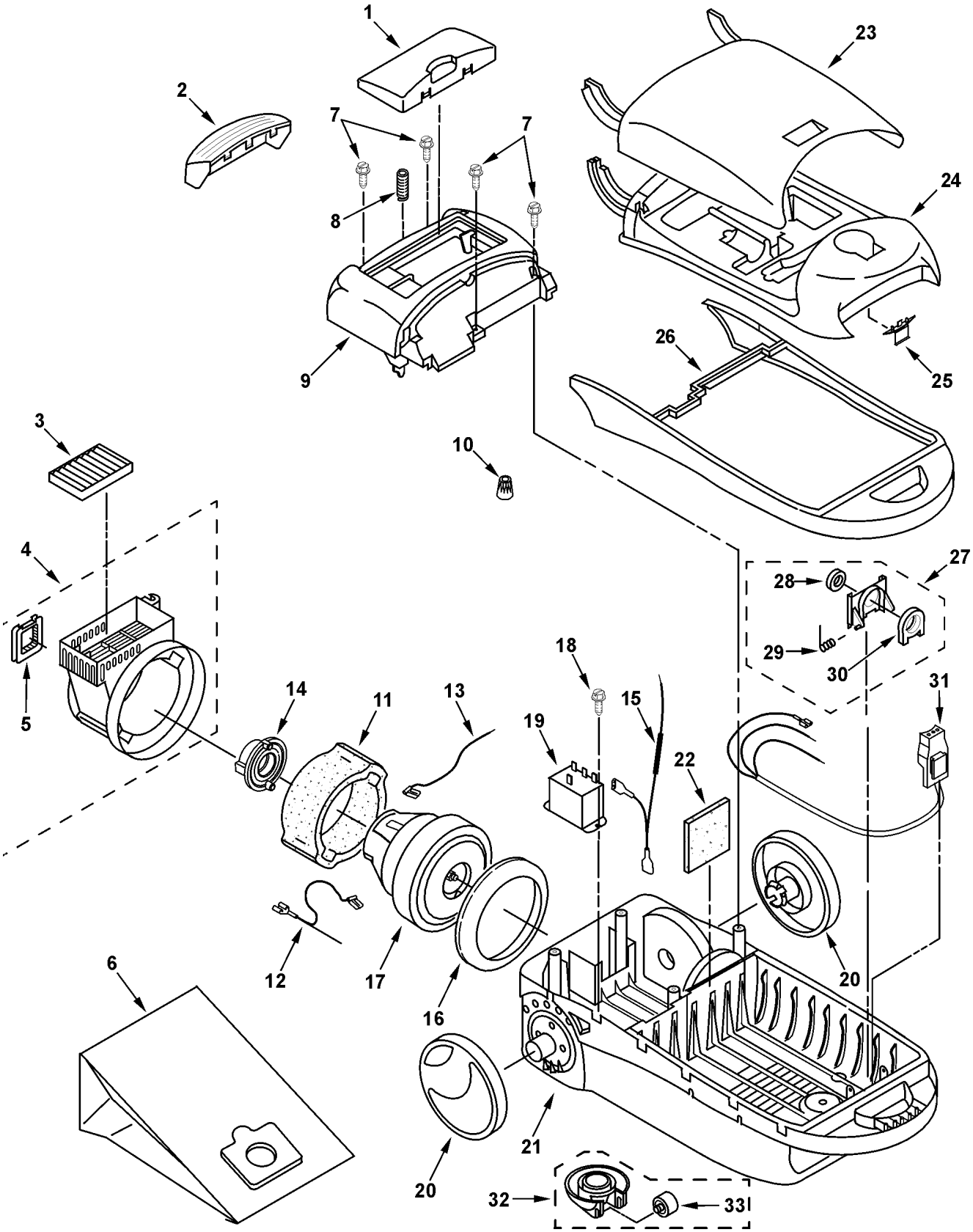


2.1.2. Parts List (Power Nozzle)

Ref. No.	Part No.	Part Name & Description	Remarks	
1	AC50XDMKZR03	POWER NOZZLE ASSEMBLY	1	
2	AC02RDGBZRU3	NOZZLE TOP	1	
3	AC21HAKTZ000	WINDOW COVER	1	
4	AC10AAKTZV06	FURNITURE GUARD	1	
5	AC13DAUJZVU6	BUTTON EXTENSION	1	
6	AC21HGJZ00	LENS HEIGHT ADJUST	1	
7	AC37KAKSZ000	FILTER-INTAKE/EXHAUST	2	
8	AC01QAKTZW03	AGITATOR COVER	1	
9	AMC681-550	SCREW	2	
10	AC62VAKTZV06	SWIVEL CAP	1	
11	AC28GADFZ00	LIGHT BULB	1	
12	AC93HDAYZ000	BULB SOCKET	1	
13	AC47AATYZV06	FOOT PEDAL	1	
14	AC64EAWBZV06	CORD & PLUG	1	
15	AC13DATYZV06	COVER PLUG HOUSING	1	
16	AMC415-3196	SWIVEL	1	
17	AMC742-019	SWIVEL SEAL	2	
18	AC83MAKSZV06	INDICATOR BLOCK ASSEMBLY	1	
19	AMC722-909	WASHER THRUST	1	SHIPPED 10 PER PACKAGE
20	AMC722-955	CATCH-INDEXING	1	
21	AMC725-635	WASHER	1	SHIPPED 10 PER PACKAGE
22	AMC742-016	RATCHET-CATCH	1	
23	AMC747-287	INDICATOR LEVER	1	
24	AC48AMGZV06	PAD FOOT PEDAL	1	
25	AMC742-015	INDICATOR BLOCK	1	
26	AMC725-775	SPRING ASSIST	1	
27	AMC747-291	CAM INDICATOR	1	
28	AC84RBZMZ000	AGITATOR	1	
29	AMC681-297	SCREW	4	
30	AMC705-093	MOTOR BRIDGE	1	
31	AC747156	MOTOR GASKET	1	
32	AC90FCUZZ000	MOTOR	1	
33	AC28SAXAZ000	BELT MICRO GROOVE	1	
34	AMC742-002	MOTOR ADJUST SPRING	1	
35	AMC-1CTCE23	WIRE CONNECTOR	2	SHIPPED 10 PER PACKAGE
36	AC97KAXEZV04	OVERLOAD PROTECTOR	1	
37	AC47AGJZV06	HANDLE RELEASE	1	
38	AMC742-013	LIFTER	1	
39	AC03RAKTZU01	FLOOR NOZZLE	1	
40	AC64CAKTZ000	BUSHING	2	
41	AC01CAKSZV06	WHEEL	2	INCLUDES ITEM 40 BUSHING
42	AMC744-029	FRONT AXLE	1	

2.2. Canister

2.2.1. Exploded View

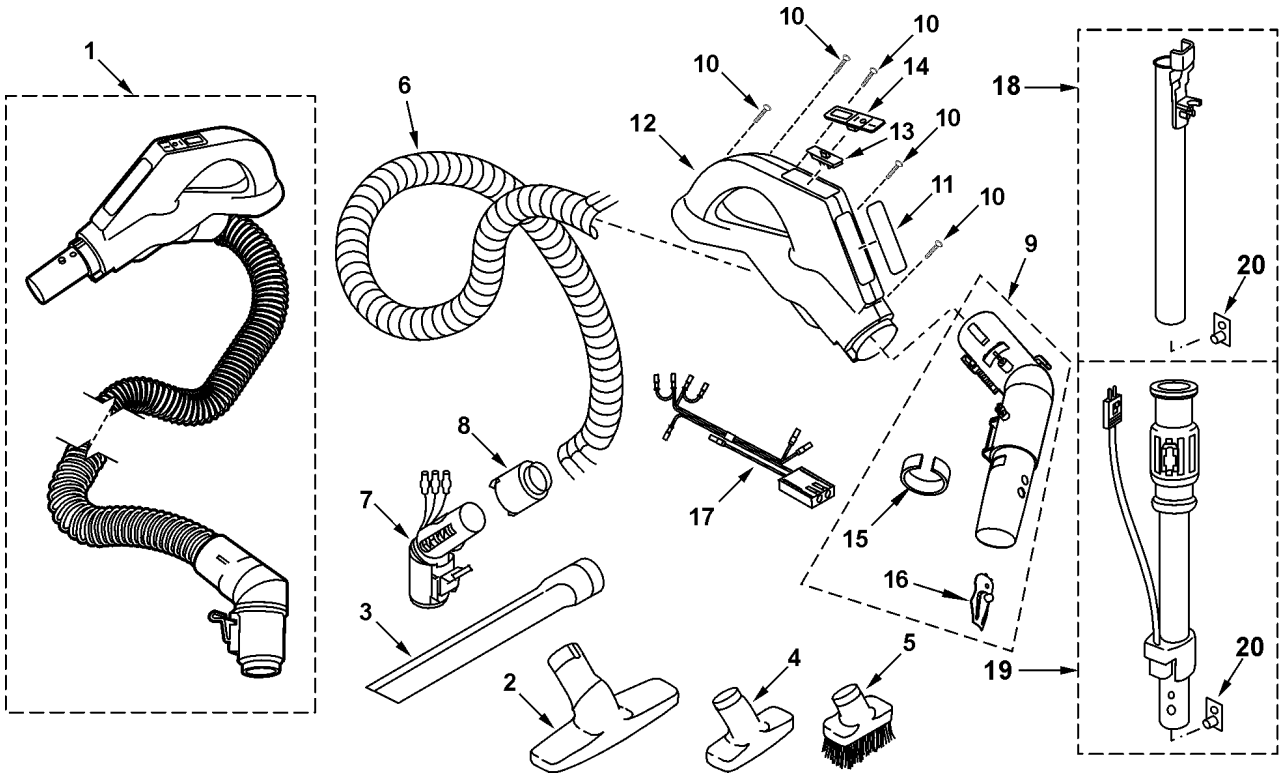


2.2.2. Parts List

Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC41KBAKZRU3	FILTER COVER	1	
2	AC46NAKTZV06	CORD REWIND BUTTON	1	
3	AC38KBRMZ000	HEPA FILTER	1	
4	AC93FAUXZ000	MOTOR ENCLOSURE	1	
5	AC03FAKTZ000	MOTOR RUBBER SUPPORT	1	
6	AC16KGFZ00	DUST BAG	1	
7	AMC414-8999	SCREW	1	SHIPPED 10 PER PACKAGE
8	AMC744-258	SPRING	1	
9	AC90QCZSZR03	CANOPY COVER	1	
10	AC4154460	WIRE CONNECTOR	1	SHIPPED 10 PER PACKAGE
11	AC99GAKTZ000	NOISE SUPPRESSOR	1	
12	AC85GDMKZ000	LEAD WIRE - BLACK	1	
13	AC43GDGBZ000	LEAD WIRE - WHITE	1	
14	AC03FAXAZ000	MOTOR REAR SUPPORT	1	
15	AC81GAWAZ000	LEAD WIRE ASSEMBLY	1	
16	AC02FCUNZ000	MOTOR FRONT SUPPORT	1	
17	AC92FCJNZ000	MOTOR	1	
18	AMC-XTN4+14BFY	SCREW	1	SHIPPED 10 PER PACKAGE
19	AC30EAWPZ000	RELAY	1	
20	AC99CAKTZV07	WHEEL	1	
21	AC03ACZSZV07	LOWER BODY	1	
22	AC37KAKTZ000	SECONDARY FILTER	1	
23	AC74PDMKZRU3	TOOL COVER	1	
24	AC60KCRXZRU3	HOOD	1	
25	AC01DAKTZV07	BUCKLE	1	
26	AC31AAXAZV06	FURNITURE GUARD	1	
27	AC11KAKTZR0K	BAG SUPPORTER ASSEMBLY	1	
28	AC64HAKTZ000	INLET (BAG) PACKING	1	
29	AMC706-024	SPRING, BAG MOUNT ASSEMBLY	1	
30	AC03LAKTZ000	BAG MOUNT GASKET	1	
31	AC90EDBXZ006	RECEPTACLE	1	
32	AC93CAKTZV07	CASTER ROLLER UNIT	1	
33	AC95CAKTZV06	CASTER WHEEL	1	

2.3. Hose & Attachments

2.3.1. Exploded View

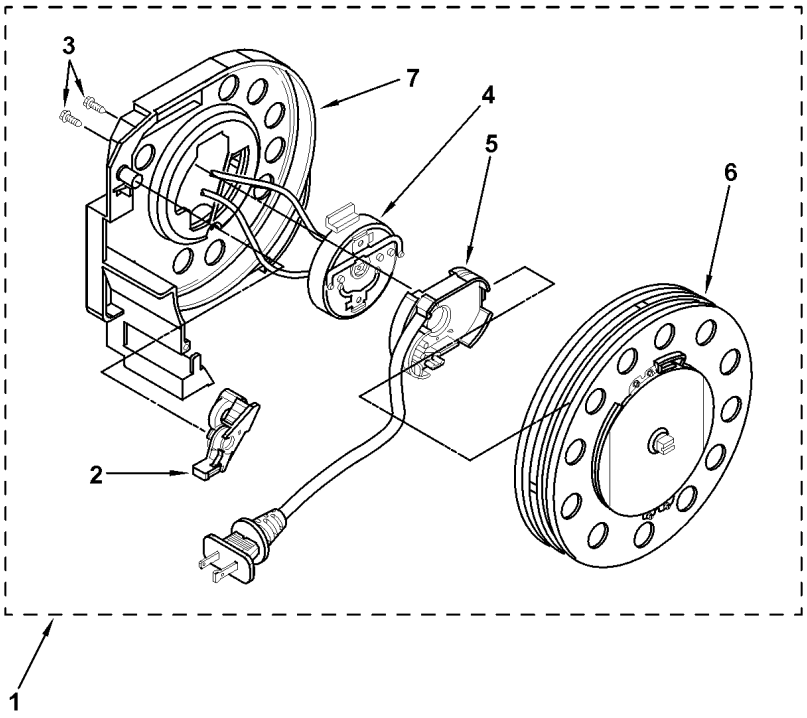


2.3.2. Parts List

Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC94PCHKZV06	HOSE ASSEMBLY	1	
2	AC96RAKZZV06	FLOOR BRUSH	1	
3	AC60RAKZZV06	CREVICE TOOL	1	
4	AC86RAKZZV06	FABRIC BRUSH	1	
5	AC88RAKZZV06	DUSTING BRUSH	1	
6	AC05PSUZV06	HOSE ONLY	1	
7	AC92PCAZZV06	SWIVEL ASSY	1	
8	AC22PAFZZV06	HOSE ADAPTER	1	
9	AC98PSTZV06	CURVED PIPE INIT	1	
10	AXTN4+12BFY	SCREW	5	SHIPPED 10 PER PACKAGE
11	AC31TBMVZ0U0	ORNAMENTAL PLATE	1	
12	AC93BSTZV06	HANDLE ASSEMBLY	1	
13	AC09ESTZ000	SLIDE SWITCH	1	
14	AC99EAVKZVU7	SLIDE KNOB	1	
15	AC54PAPAZV06	CONTROL SUCTION	1	
16	AMC415-2093	SPRING WAND LOCK	1	
17	AC37GSTZV06	WIRE HARNESS	1	
18	AC97PAENZV06	UPPER WAND	1	
19	AC99PAKSZV06	LOWER WAND	1	
20	AMC725-419	SPRING WAND LOCK	1	SHIPPED 10 PER PACKAGE

2.4. Cord Reel

2.4.1. Exploded View

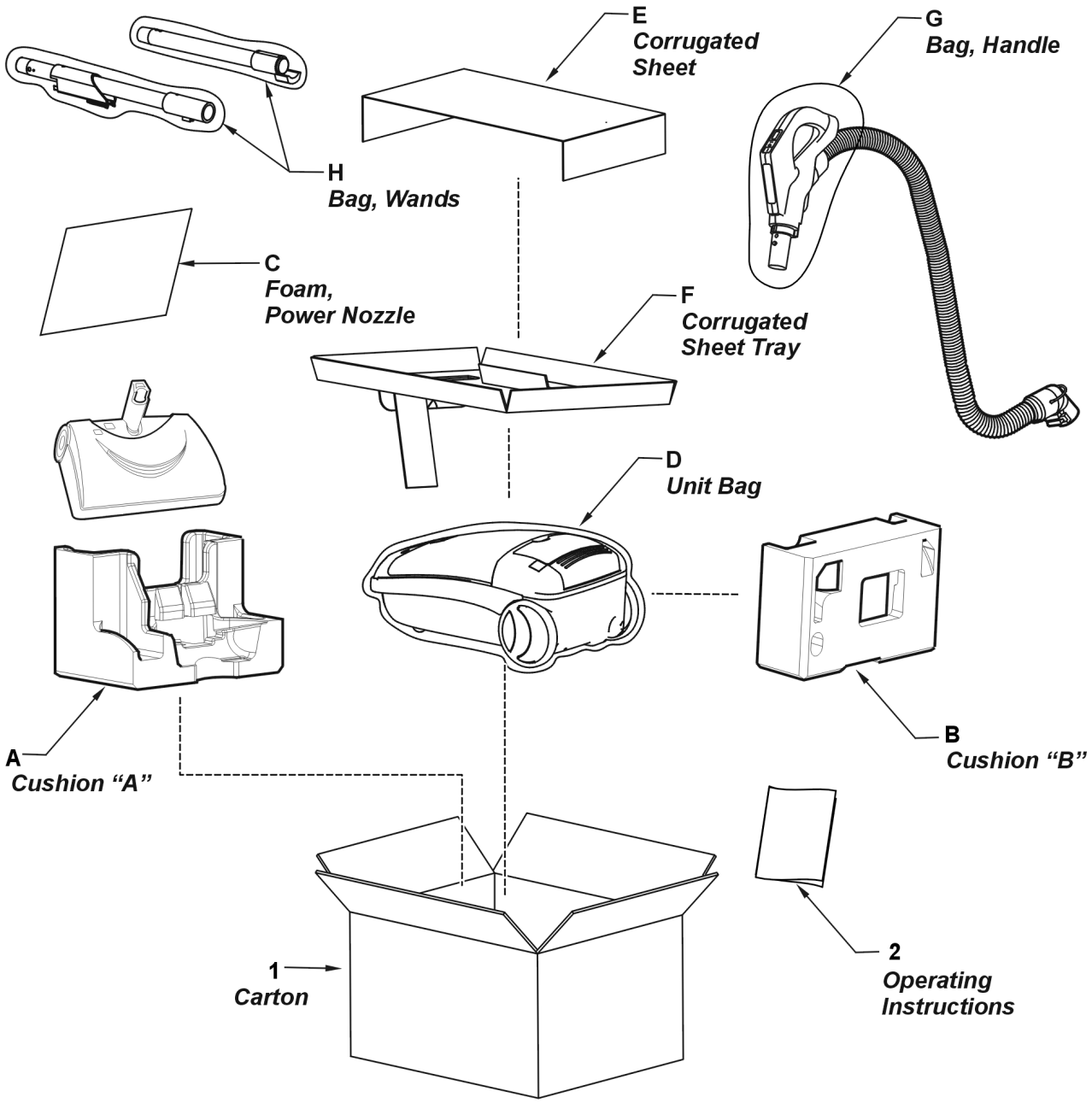


2.4.2. Parts List

Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC99NCVAZV06	CORD REEL	1	
2	AC94NAKTZV06	BRAKE LEVER	1	
3	AXTN4+16BFY	SCREW	2	SHIPPED 10 PER PACKAGE
4	AC19NAVAZ000	CONTACT BASE	1	
5	AC98NCVAZ000	CONTACT DISC ASSY	1	
6	AC01NCUHZ000	CORD REEL HUB ASSY	1	
7	AC04ACUHZV07	CORD REEL BRACKET	1	

2.5. Packing Materials

2.5.1. Exploded View



2.5.2. Parts List

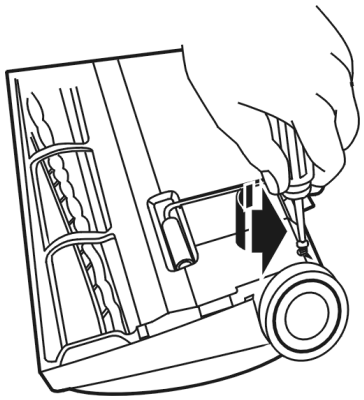
Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
1	AC61ZDMKZ000	PACKAGING ASSEMBLY	1	INCLUDES ITEMS A - H
2	AC01ZDMKZ000	OPERATING INSTRUCTIONS	1	

3 SERVICE PROCEDURES - POWER NOZZLE

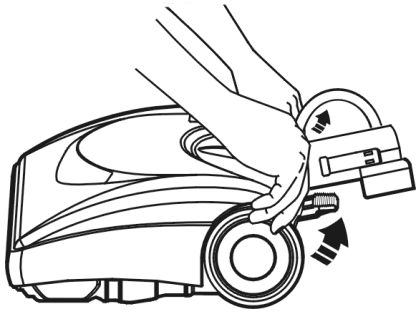
3.1. BELT

3.1.1. Belt Removal

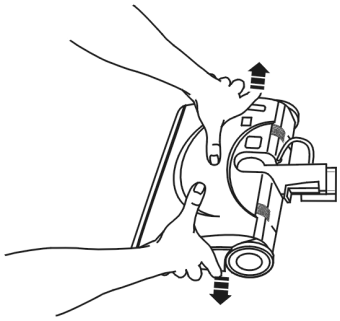
1. Turn Power Nozzle upside down.
2. Unscrew the two (2) Power Nozzle cover screws.



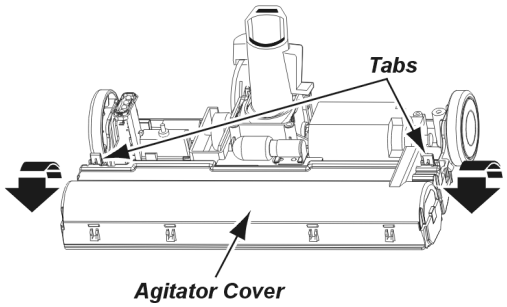
3. Turn Power Nozzle right side up. Press handle release pedal and lower the swivel. Lift rear latches up.



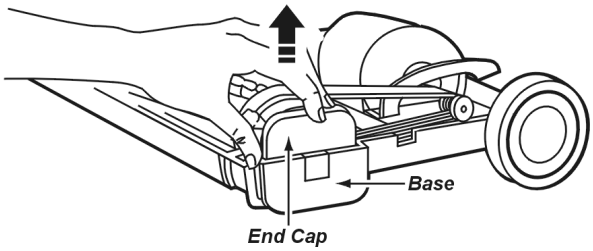
4. To remove cover, grasp the sides and pull out.



5. Depress tabs on rear of agitator cover and rotate forward to release from the Power Nozzle base.

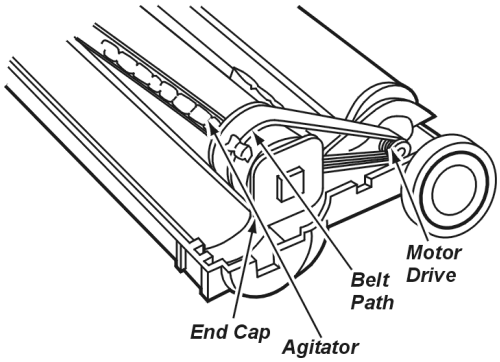


6. Lift agitator assembly out and remove worn belt.

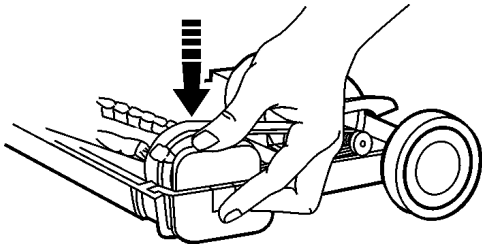


3.1.2. Belt Replacement

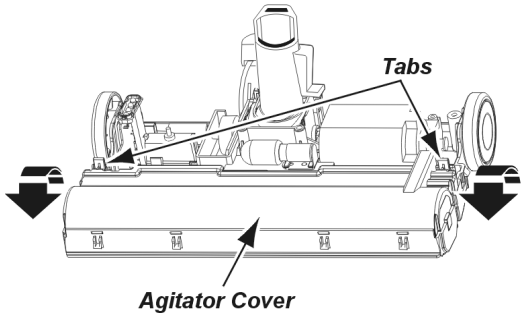
1. Install new belt over motor drive, then over belt path.



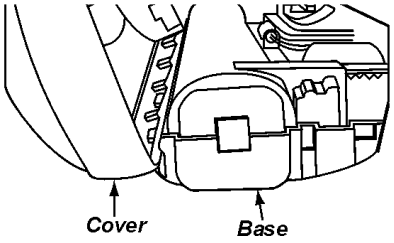
2. Place agitator assembly back into Power Nozzle.



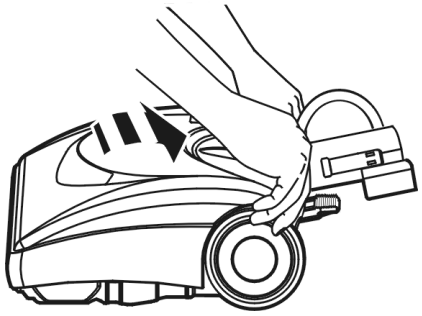
3. Reinstall agitator cover by lining up the front tabs and slots and rotating downward until the latches snap into place.



4. Line up front of cover and base. Rest cover on front edge.



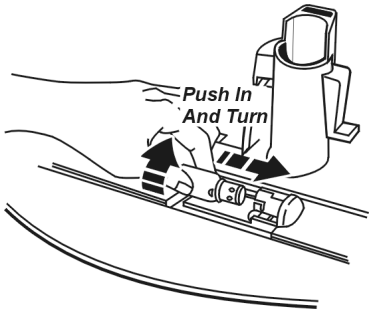
5. Rotate cover back. Press cover firmly until side and rear tabs snap into place. Turn Power Nozzle upside down and replace two (2) cover screws.



3.2. BULB

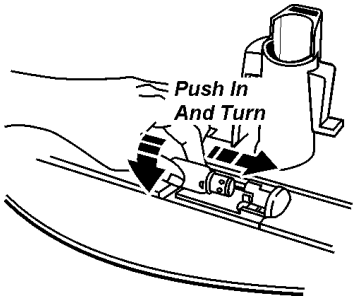
3.2.1. Bulb Removal

1. Remove Power Nozzle cover (see Belt Removal).
2. Push in and turn bulb counterclockwise, then pull out to remove.



3.2.2. Bulb Replacement

1. Push in and turn bulb clockwise, to replace. Bulb must not be higher than 15 Watts(130 Volts).



2. Reinstall Power Nozzle cover (see Belt Replacement)..

3.3. POWER NOZZLE MOTOR

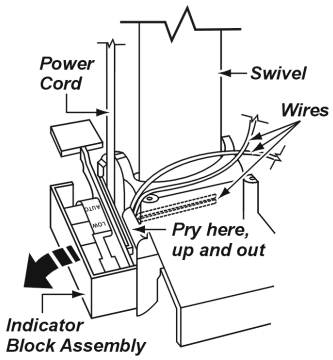
3.3.1. Specifications

1. 120V., 60Hz.
2. Amps 2.0/2.7 (max.) at 18,000/14,550 R.P.M.
3. Watts 225/298 (max.) at 18,000/14,550 R.P.M.
4. Torque 55/100 Nm at 18,000/14,550 R.P.M.

3.3.2. Motor Replacement

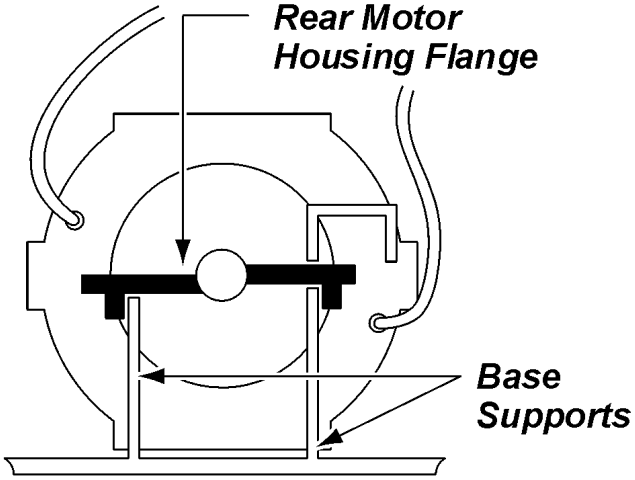
1. Remove Power Nozzle cover, nozzle cover and agitator assembly (see BELT REMOVAL).
2. Remove two (2) motor bridge screws. Lift out bridge and motor.

   NOTE: Observe routing of motor wires and all other wiring before removing motor.
3. Hook a finger under the center of the overload protector and lift to free it from the retaining tabs. Remove the overload protector wire terminals. Check continuity by depressing the button completely. When the button is released there should be continuity between the two poles when checked. If all components and items in the troubleshooting guide have been checked and the overload protector continues to trip, it should be replaced.
4. Insert a flat screwdriver blade between the indicator block assembly and the plastic retainer for the four (4) wires. Pry up and out to free the indicator block assembly from the retaining tabs.



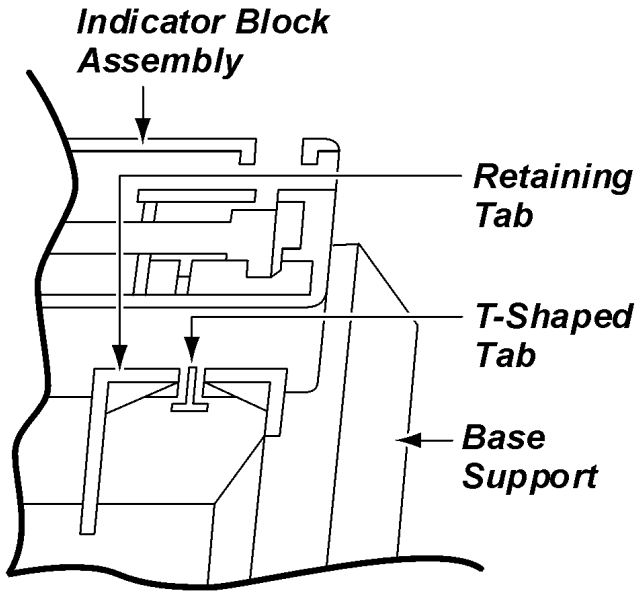
5. Remove wire connectors to free motor lead wires.
6. Install new motor. Assure motor is fully seated on all four (4) front and rear base supports. Rear motor housing flange should be in slot of base support.

   CAUTION: Do not pinch wire.
7. Install motor bridge and secure with two (2) screws.



8. Reroute all wiring per original layout utilizing wire retainers provided, and proper placement of wires to prevent pinching of wires and interference when reinstalling the indicator block assembly. Connect wires and apply wire nuts, (reference WIRING DIAGRAM & DRAWING).

9. Install indicator block assembly. Holding the assembly at a slight angle, insert the edge of the part behind the retaining tabs (use T-shaped tab on assembly to align in slot of retaining tab). With fingers lifting base off the floor (to free front axle) use both thumbs to push the indicator block assembly down until it snaps in place.



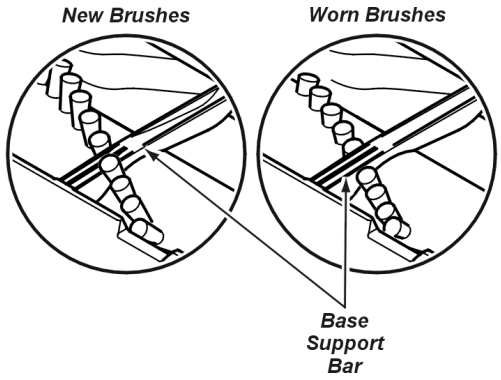
10. Install the overload protector by snapping into position between the two retaining tabs and with one end pushed up against the indicator block assembly.

11. Replace remaining parts (see BELT REMOVAL).

3.4. AGITATOR ASSEMBLY

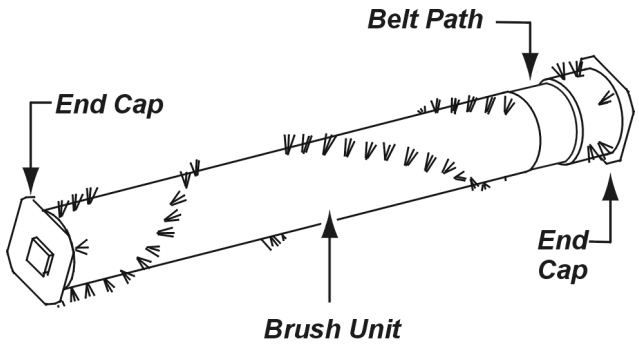
3.4.1. Agitator Checking

1. When brushes are worn to the level of the base support bars, replace the agitator.



3.4.2. Agitator Assembly Replacement

1. Remove Power Nozzle cover, agitator cover, belt and agitator assembly (see BELT REMOVAL).
2. Reassemble belt, agitator assembly, Power Nozzle cover, light bulb and light cover (see BELT REPLACEMENT).

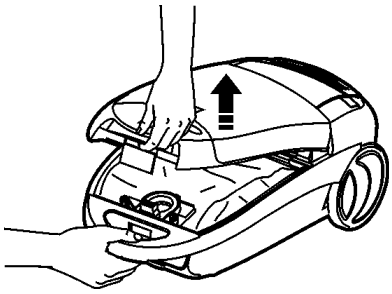


4 SERVICE PROCEDURES - CANISTER

4.1. HOOD

4.1.1. Removal

1. Lift up on the hood release as the hood is raised.



2. With the hood all the way up, force it until the two ends pop out of place.

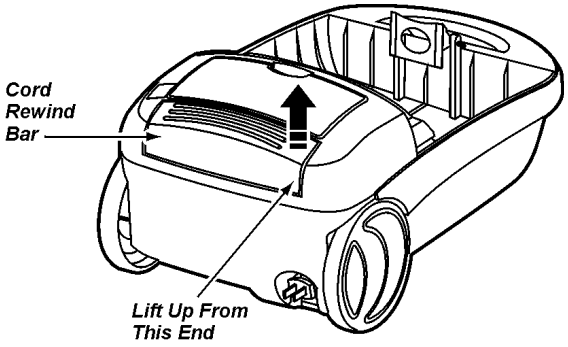
4.1.2. Replacement

1. Place each end of the hood into the slot while holding upright in the position it was removed.
2. Work both ends into the openings and close.

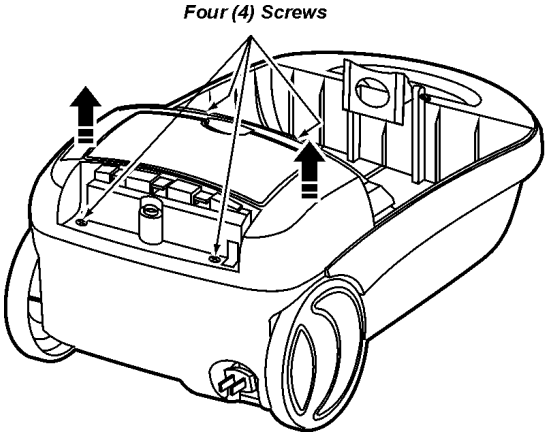
4.2. CANOPY COVER

4.2.1. Removal

1. Remove the cord rewind bar by snapping it off from rear to front.



2. The canopy cover has a screw on each of the four (4) corners securing it in place. Use a screwdriver to remove each screw.



3. Lift the canopy cover off of the canister base.
4. Secure the power cord to prevent retracting as you are servicing the motor.

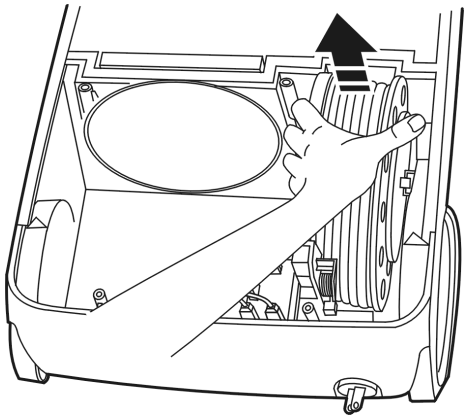
4.2.2. Replacement

1. Set the canopy cover in position and secure the canopy with (4) screw holes.
2. Snap the cord rewind bar into place on the canopy cover.

4.3. CORD REEL

4.3.1. Removal

1. Remove hood (see HOOD Removal).
2. Remove canopy cover (see CANOPY COVER Removal).
3. Disconnect both cord reel wires.
4. Remove the cord cover cap from the base.
5. Lift the cord reel straight up to remove. Do this by prying it out of the retainers.



4.3.2. Replacement

1. Connect both wire cord reel wires to the new cord reel assembly.
2. Route the plug through the hole in the canister base and snap the cord cover cap in place.
3. Position the slots in the cord reel brackets into place over the retainers in the base.
4. Route the cord reel wire into the provided slot to prevent pinching
5. Replace canopy cover and brake pedal (see Canopy Cover Replacement.
6. Replace hood (see Hood Replacement).

4.4. CANISTER MOTOR

4.4.1. Removal

1. Remove hood (see HOOD Removal).
2. Remove canopy cover (see CANOPY COVER Removal).
3. Remove the motor enclosure from the motor.
4. Remove white wire and black wire terminal from the motor.

4.4.2. Replacement

1. Attach white wire and black wire terminals to the new motor.
2. Replace the enclosure on the motor.
3. Place new motor in canister base

4. Replace canopy cover and brake pedal (see Canopy Cover Replacement.
5. Replace hood (see Hood Replacement).